I. Amendments

A. In the Claims

This listing of claims will replace all prior versions and listings of claims in the application. Please amend claims 9 and 16, and cancel claims 11, 12, 18 and 19, as follows:

Listing of the Claims

1. (previously cancelled)

2. (previously cancelled)

3. (previously cancelled)

4. (previously cancelled)

5. (previously cancelled)

6. (previously cancelled)

7. (previously cancelled)

8. (previously cancelled)

9. (currently amended) A color sensor configured to sense a plurality of color components of light incident thereon, comprising:

a Red color sensor circuit comprising a Red photodetector configured to receive incident light thereon and provide a Red photocurrent therefrom to a Red

transimpedance amplifier as in input thereto in response to the incident light, the Red ~~color sensor circuit~~ transimpedance amplifier being configured to provide a Red output voltage indicative of a Red intensity of a Red spectrum included in the incident light as the Red intensity occurs under a current operating temperature, the Red transimpedance amplifier further comprising a Red feedback resistor component arranged in parallel with a Red compensation capacitor, the Red feedback resistor component and the Red compensation capacitor having values selected to permit accurate measurement of the Red intensity, a first slope of a voltage response of the Red transimpedance amplifier not varying with temperature;

a Green color sensor circuit comprising a Green photodetector configured to receive incident light thereon and provide a Green photocurrent therefrom to a Green transimpedance amplifier as in input thereto in response to the incident light, the Green ~~color sensor circuit~~ transimpedance amplifier being configured to provide a Green output voltage indicative of a Green intensity of a Green spectrum included in the incident light as the Green intensity occurs under the current operating temperature, the Green transimpedance amplifier further comprising a Green feedback resistor component arranged in parallel with a Green compensation capacitor, the Green feedback resistor component and the Green compensation capacitor having values selected to permit accurate measurement of the Green intensity, a second slope of a voltage response of the Green transimpedance amplifier not varying with temperature;

a Blue color sensor circuit comprising a Blue photodetector configured to receive incident light thereon and provide a Blue photocurrent therefrom to a Blue transimpedance amplifier as in input thereto in response to the incident light, the Blue ~~color sensor circuit~~ transimpedance amplifier being configured to provide a Blue output voltage indicative of a Blue intensity of a Blue spectrum included in the incident light as the Blue intensity occurs under the current operating temperature, the Blue transimpedance amplifier further comprising a Blue feedback resistor component arranged in parallel with a Blue compensation capacitor, the Blue feedback resistor component and the Blue compensation

capacitor having values selected to permit accurate measurement of the Blue intensity, a third slope of a voltage response of the Blue transimpedance amplifier not varying with temperature;

a dark color sensor circuit comprising a dark photodetector configured to provide a dark photocurrent proportional to the current operating temperature to a dark color transimpedance amplifier as in put thereto, the dark color ~~sensor circuit~~ transimpedance amplifier converting the dark photocurrent into a ~~single~~ dark current offset voltage, the dark color transimpedance amplifier further comprising a dark feedback resistor component arranged in parallel with a dark compensation capacitor, the dark feedback resistor component and the dark compensation capacitor having values selected to permit accurate measurement of the dark photocurrent, a fourth third slope of a voltage response of the dark color transimpedance amplifier not varying with temperature;

a multiplexer configured to receive the Red, Green and Blue output voltages as inputs thereto and to select one of the Red, Green and Blue output voltages as a selected color sensor output voltage;

~~an~~ a differential amplifier configured to receive the selected color sensor output voltage and the dark current offset voltage as inputs thereto and to adjust the selected color sensor output voltage using the dark current offset voltage to cancel the contribution of the dark current offset voltage and relative temperature coefficient effect corresponding thereto in the selected color sensor output voltage according to the current operating temperature and thereby provide a color sensor output signal;

wherein each of the foregoing resistor components has a value ranging between 0.5 megaohms and 200 megaohms, each of the foregoing compensation capacitors has a value ranging between 2 picofarads and 400 picofarads, and the color sensor output signal represents the true intensity of the color corresponding to the selected color sensor output voltage owing to increased temperature robustness provided by the transimpedance amplifiers.

10. (previously cancelled)

11. (cancelled)

12. (cancelled)

13. (previously presented) The color sensor of claim 9, wherein the multiplexer selects Red as the selected color sensor output voltage

14. (previously presented) The color sensor of claim 9, wherein the multiplexer selects Green as the selected color sensor output voltage.

15. (previously presented) The color sensor of claim 9, wherein the multiplexer selects Blue as the selected color sensor output voltage.

16. (currently amended) A method of compensating for fluctuations in dark current arising from changes in current operating temperature in a color sensor, comprising:

generating a Red photocurrent with a Red photodetector in response to incident light falling on the Red photodetector and providing the Red photocurrent to a Red transimpedance amplifier as in input thereto to provide a Red output voltage indicative of a Red intensity of a Red spectrum included in the incident light as the Red intensity occurs under a current operating temperature, the Red transimpedance amplifier comprising a Red feedback resistor component arranged in parallel with a Red compensation capacitor, the Red feedback resistor component and the Red compensation capacitor having values selected to permit accurate measurement of the Red intensity, a first slope of a voltage response of the Red transimpedance amplifier not varying with temperature;

generating a Green photocurrent with a Green photodetector in response to incident light falling on the Green photodetector and providing the Green photocurrent to a Green transimpedance amplifier as input thereto and to provide a Green output voltage indicative of a Green intensity of a Green spectrum

included in the incident light as the Green intensity occurs under the current operating temperature, the Green transimpedance amplifier comprising a Green feedback resistor component arranged in parallel with a Green compensation capacitor, the Green feedback resistor component and the Green compensation capacitor having values selected to permit accurate measurement of the Green intensity, a second slope of a voltage response of the Green transimpedance amplifier not varying with temperature;

generating a Blue photocurrent with a Blue photodetector in response to incident light falling on the Blue photodetector and providing the Blue photocurrent to a Blue transimpedance amplifier as an input thereto and to provide a Blue output voltage indicative of a Blue intensity of a Blue spectrum included in the incident light as the Blue intensity occurs under the current operating temperature, the Blue transimpedance amplifier comprising a Blue feedback resistor component arranged in parallel with a Blue compensation capacitor, the Blue feedback resistor component and the Blue compensation capacitor having values selected to permit accurate measurement of the Blue intensity, a third slope of a voltage response of the Blue transimpedance amplifier not varying with temperature;

generating a dark photocurrent proportional to the current operating temperature and providing the dark photocurrent to a dark color transimpedance amplifier as an input thereto, ~~converting~~ the dark color transimpedance amplifier converting the dark photocurrent into a dark current offset voltage, the dark color transimpedance amplifier further comprising a dark feedback resistor component arranged in parallel with a dark compensation capacitor, the dark feedback resistor component and the dark compensation capacitor having values selected to permit accurate measurement of the dark photocurrent, a fourth slope of a voltage response of the dark color transimpedance amplifier not varying with temperature;

providing the Red, Green and Blue output voltages as separate inputs to a multiplexer, and selecting, with the multiplexer, one of the Red, Green and Blue output voltages as a selected color sensor output voltage;

providing the selected color sensor output voltage and the dark current offset voltage as inputs to ~~an~~ a differential amplifier;

adjusting, in the amplifier, the selected color sensor output voltage using the dark current offset voltage to cancel the contribution of the dark current offset voltage and relative temperature coefficient effect corresponding thereto in the selected color sensor output voltage according to the current operating temperature and thereby provide a color sensor output signal;

wherein each of the foregoing resistor components has a value ranging between 0.5 megaohms and 200 megaohms, each of the foregoing compensation capacitors has a value ranging between 2 picofarads and 400 picofarads, and the color sensor output signal represents the true intensity of the color corresponding to the selected color sensor output voltage owing to increased temperature robustness provided by the transimpedance amplifiers..

17. (previously cancelled)

18. (cancelled)

19. (cancelled)

20. (previously presented) The method of claim 16, wherein the multiplexer selects Red as the selected color sensor output voltage.

21. (previously presented) The method of claim 16, wherein the multiplexer selects Green as the selected color sensor output voltage.

22. (previously presented) The method of claim 16, wherein the multiplexer selects Blue as the selected color sensor output voltage.